

July 21, 2023

Grafton Planning Board
Grafton Municipal Center
30 Providence Road
Grafton, MA 01519

T 508-856-0321

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gravesengineering.com

**Subject: 11 Wheeler Road (Stillwater Estates)
Engineer's Opinion Construction Cost Estimate**

Dear Planning Board Members:

Per the request of the developer and the Planning Board, Graves Engineering, Inc. (GEI) has calculated an updated "work remaining" construction cost estimate for the 11 Wheeler Road subdivision, also known as Stillwater Estates, in Grafton, Massachusetts. This estimate supersedes our previous "work remaining" estimate dated November 17, 2022.

Please find attached the point-by-point items of the cost estimate based upon the following:

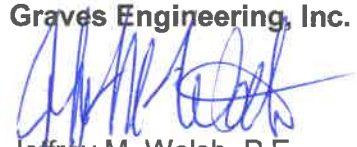
- The estimate is based upon the plan set entitled "Flexible Development – Definitive Plan, 11 Wheeler Road, Grafton, Massachusetts" dated August 20, 2020 and last revised July 28, 2021, prepared by Andrews Survey & Engineering, Inc.
- The estimate consists of work associated with road and utility infrastructure construction. The estimate does not include any work associated with lot development.
- Funds were held for recently placed topsoil and hydroseed areas that have not yet achieved mature vegetative soil stabilization to cover the cost of potential repairs/reseeding.
- There has been a 20% administration and contingency added to the "work remaining" estimate for inspections, contract administration, and inflation.

The purpose of our construction cost estimate is to provide the Grafton Planning Board with an "engineer's opinion" of the possible construction value for the project. Our estimate is based upon typical municipally bid public works projects subject to state wage rates. We use state wage rates as the municipality will be required to pay prevailing state wage rates should they ultimately become responsible for completing the project. The rates indicated within this estimate reflect current market conditions.

In addition, the construction estimate should not be construed to be a final punch list of items that are not complete. At each drawdown requested by the developer, individual line items will be evaluated for completeness, unit prices for each item revised to reflect the current cost of work, and additional items added or deleted from the estimate, if needed. Streets and applicable amenities are not considered complete until a determination is made by the Grafton Planning Board.

If you have any questions or comments concerning this cost estimate, please feel free to contact our office.

Very truly yours,
Graves Engineering, Inc.



Jeffrey M. Walsh, P.E.
Principal

Attachments:
Engineer's Opinion Construction Cost Estimate

cc: Bradley Wright; Country Home Builders, Inc.
Andy Russo; Russo Brothers



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SITE DEVELOPMENT/SUBDIVISION CONSTRUCTION BUDGET						
PROJECT: 11 WHEELER ROAD (STILLWATER ESTATES) STILLWATER LANE STATIONS 0+00 TO 4+90.22						
DATE: July 21, 2023 Budgets of work for the entire project and for work yet to be completed.						
The following construction budget is based upon the Definitive Plan last revised:				07/28/21		
This estimate is based upon site visits performed through:				07/20/23		
	UNITS	\$/UNIT	100% COST ESTIMATE QUANTITY	100% COST ESTIMATE VALUE	CONSTRUCTION REMAIN'G QUANTITY	07/20/23 VALUE
RIGHT OF WAY						
Earth Excavation	Cu. Yds.	\$12.00	3,400	\$40,800.00	0	\$0.00
Clear & Grub	Acres	\$20,000.00	0.7	\$14,000.00	0	\$0.00
Finish Grading (Grass plots only)	Sq. Yds.	\$3.00	1,100	\$3,300.00	0	\$0.00
Spread Loam	Sq. Yds.	\$3.00	1,100	\$3,300.00	600	\$1,800.00
Hydroseeding	Sq. Yds.	\$2.00	1,100	\$2,200.00	600	\$1,200.00
Trees	Each	\$400.00	25	\$10,000.00	0	\$0.00
ROADWAY						
Construction Entrance (Riprap)	Tons	\$85.00	25	\$2,125.00	0	\$0.00
Prep Subgrade	Sq. Yds.	\$5.00	1,700	\$8,500.00	0	\$0.00
Gravel Base (12")	Cu. Yds.	\$45.00	580	\$26,100.00	0	\$0.00
Fine Grade & Roll	Sq. Yds.	\$5.00	1,700	\$8,500.00	0	\$0.00
Binder Course (2.75" Compacted Thk'ness)	Tons	\$110.00	270	\$29,700.00	0	\$0.00
Asphalt Emulsion (Tack Coat)	Gal.	\$8.00	87	\$696.00	0	\$0.00
Top Course (1.5" Compacted Thk'ness)	Tons	\$110.00	150	\$16,500.00	0	\$0.00
Granite Curb Inlets - Straight	Each	\$480.00	5	\$2,400.00	0	\$0.00
Vertical Granite Curb - Straight	Lin. Ft.	\$50.00	630	\$31,500.00	0	\$0.00
Vertical Granite Curb - Curved	Lin. Ft.	\$58.75	360	\$21,150.00	0	\$0.00
Street Lights	Each	\$3,000.00	2	\$6,000.00	2	\$6,000.00
Raise Structures (Sewers, Drains, etc.)	Each	\$350.00	13	\$4,550.00	0	\$0.00
Street Sign (Stop, Street Name)	Each	\$125.00	2	\$250.00	2	\$250.00
SITE WORK						
Clear & Grub (slopes outside ROW)	Acres	\$20,000.00	0.4	\$8,000.00	0	\$0.00
Finish Grading (slopes outside ROW)	Sq. Yds.	\$3.00	1,900	\$5,700.00	0	\$0.00
Spread Loam (slopes outside ROW)	Sq. Yds.	\$3.00	1,900	\$5,700.00	480	\$1,440.00
Hydroseeding (slopes outside ROW)	Sq. Yds.	\$2.00	1,900	\$3,800.00	480	\$960.00
SIDEWALK						
Prep Subgrade	Sq. Yds.	\$5.00	220	\$1,100.00	0	\$0.00
Gravel Base (8")	Cu. Yds.	\$45.00	48	\$2,160.00	0	\$0.00
Fine Grade & Roll	Sq. Yds.	\$5.00	220	\$1,100.00	0	\$0.00
Cement Concrete Pavement (4")	Sq. Yds.	\$62.00	220	\$13,640.00	0	\$0.00
DRAINAGE						
12" HDPE	Lin. Ft.	\$80.00	250	\$20,000.00	0	\$0.00
15" HDPE	Lin. Ft.	\$90.00	150	\$13,500.00	0	\$0.00
15" HDPE Flared End Section	Each	\$875.00	1	\$875.00	0	\$0.00
Drain Manholes	Each	\$5,000.00	4	\$20,000.00	0	\$0.00
Drain Invert (Concrete or Brick)	Each	\$300.00	4	\$1,200.00	0	\$0.00
Catch Basins	Each	\$4,500.00	2	\$9,000.00	0	\$0.00

	UNITS	\$/UNIT	100% COST ESTIMATE		CONSTRUCTION	
			QUANTITY	VALUE	REMAIN'G QUANTITY	07/20/23 VALUE
Catch Basin Frame & Grate	Each	\$900.00	2	\$1,800.00	0	\$0.00
Double Catch Basins	Each	\$5,000.00	3	\$15,000.00	0	\$0.00
Double Catch Basins Frame & Grate	Each	\$1,500.00	3	\$4,500.00	0	\$0.00
Drain Manhole Rim & Cover (24")	Each	\$825.00	4	\$3,300.00	0	\$0.00
INFILTRATION BASIN						
Earth Excavation	Cu. Yds.	\$12.00	810	\$9,720.00	0	\$0.00
Finish Grading	Sq. Yds.	\$3.00	1,500	\$4,500.00	0	\$0.00
Spread Loam	Sq. Yds.	\$3.00	1,500	\$4,500.00	375	\$1,125.00
Hydroseeding	Sq. Yds.	\$2.00	1,500	\$3,000.00	375	\$750.00
Gabion Forebay	Cu. Yds.	\$85.00	63	\$5,355.00	0	\$0.00
18" HDPE	Lin. Ft.	\$120.00	65	\$7,800.00	0	\$0.00
18" HDPE Flared End Section	Each	\$1,200.00	1	\$1,200.00	0	\$0.00
Rip-Rap	Cu. Yds.	\$85.00	15	\$1,275.00	0	\$0.00
Outlet Control Structure	Each	\$5,000.00	1	\$5,000.00	0	\$0.00
Remove Sediment from Infiltration Basin	Allow	\$2,000.00	0	\$0.00	1	\$2,000.00
WATER						
8" DI Pipe	Lin. Ft.	\$145.00	510	\$73,950.00	0	\$0.00
Hydrants	Each	\$5,500.00	2	\$11,000.00	0	\$0.00
Water Service Laterals	Each	\$3,400.00	6	\$20,400.00	0	\$0.00
Water Gates & Box (8-inch)	Each	\$2,600.00	3	\$7,800.00	0	\$0.00
SEWER						
8" SDR 35 Sewer	Lin. Ft.	\$148.00	470	\$69,560.00	0	\$0.00
Manholes	Each	\$6,750.00	5	\$33,750.00	0	\$0.00
Laterals: 6" SDR 35 PVC	Each	\$2,500.00	6	\$15,000.00	0	\$0.00
Sewer Brick Invert	Each	\$400.00	5	\$2,000.00	0	\$0.00
Sewer Manhole Rim & Cover (30")	Each	\$950.00	5	\$4,750.00	0	\$0.00
SEDIMENT AND EROSION CONTROLS						
Silt Fence & Straw Wattle - Install	Lin. Ft.	\$8.00	850	\$6,800.00	0	\$0.00
Silt Fence & Straw Wattle - Maintain	Lin. Ft.	\$4.00	0	\$0.00	0	\$0.00
ELECTRIC COMMUNICATIONS						
Electrical/CATV/Tel Conduit	Lin.Ft.	\$60.00	560	\$33,600.00	0	\$0.00
MISCELLANEOUS						
Bounds, Granite (Roadway)	Each	\$600.00	12	\$7,200.00	12	\$7,200.00
Bounds, Granite (Easements)	Each	\$600.00	4	\$2,400.00	4	\$2,400.00
Bounds, Granite (Open Space)	Each	\$600.00	7	\$4,200.00	7	\$4,200.00
Acceptance Plans	Sheet	\$1,500.00	1	\$1,500.00	1	\$1,500.00
As Built Plans	Sheet	\$1,900.00	2	\$3,800.00	2	\$3,800.00
Subtotal:				\$702,006.00		\$34,625.00
20% Contingency/Inflation:						\$6,925.00
PROJECT: 11 WHEELER ROAD				TOTAL:		\$41,550.00
TOTAL (Rounded):					*	\$42,000.00
20% of "100% COST ESTIMATE" (Rounded):				*		\$140,000.00
* This estimate was prepared to assist the Planning Board with establishing the amount of surety for this project.						
In accordance with Grafton Subdivision Rules and Regulations, the surety value established by the Board may						
vary from this estimate.						